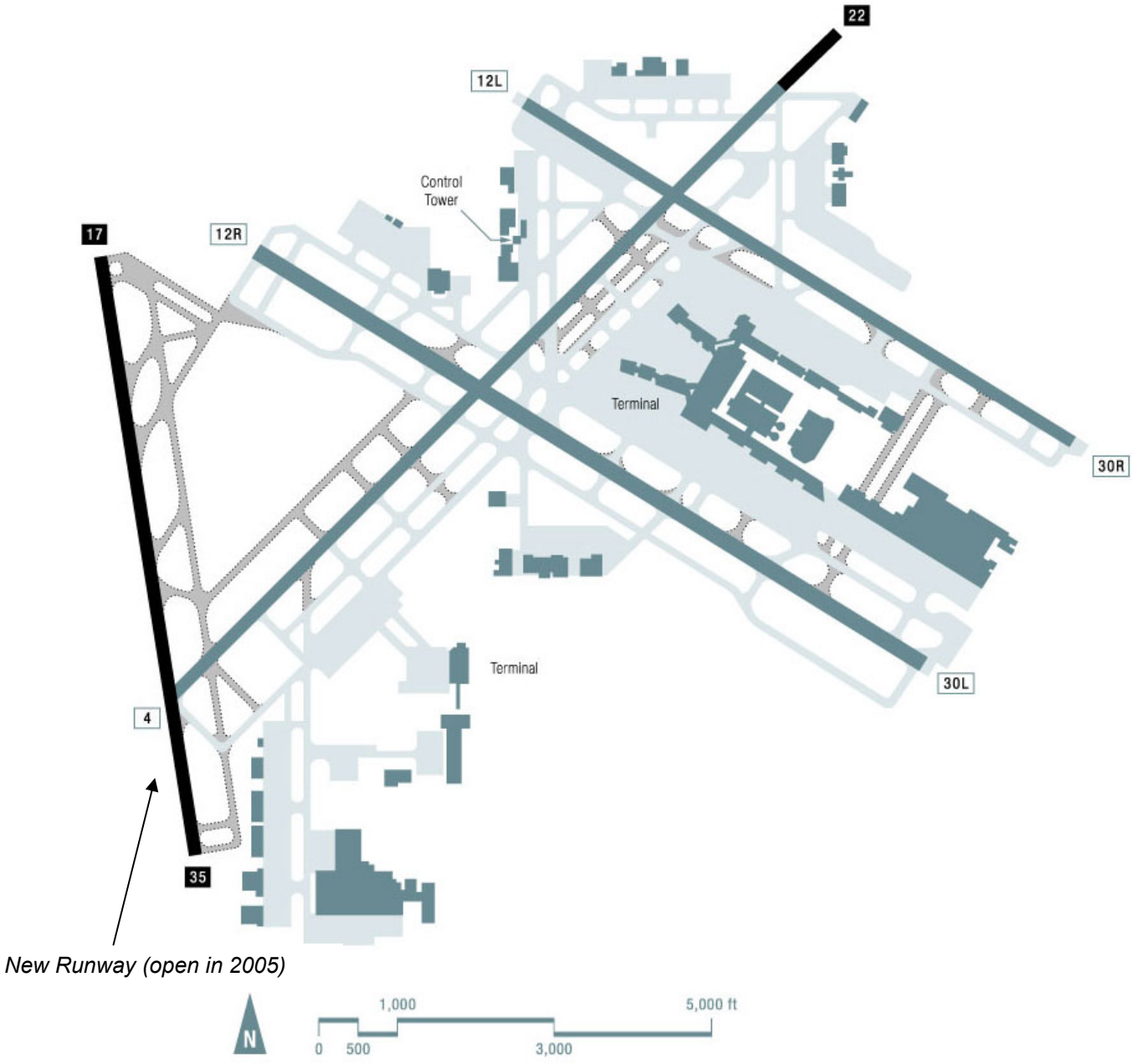
MINNEAPOLIS-ST. PAUL – Minneapolis-St. Paul International (MSP)



Benchmark Results

- The capacity benchmark for Minneapolis-St. Paul International Airport today is 114-120 flights per hour (arrivals and departures) in Optimum weather, when visual approaches can be conducted.
- The benchmark rate falls to 112-115 flights per hour in Marginal conditions, and 112-114 flights per hour in IFR conditions, for the most commonly used runway configuration in these conditions. These benchmark values assume that the Precision Runway Monitor (PRM) system at MSP is operational, which makes simultaneous independent approaches possible in bad weather.
- These benchmark rates represent balanced operations, with equal numbers of arrivals and departures per hour. Greater total throughput may be possible during arrival or departure peaks.
- A new runway, Runway 17/35, is planned for completion in 2005. In Optimum and Marginal conditions this new runway will be used for departures to the south during departure peaks or arrivals from the south in an arrival push. It is expected that in IFR conditions the runway will be used for departures to the south. This assumes that airspace, ground infrastructure, and environmental constraints allow the planned use of the new runway.
- Other planned technological improvements at MSP such as advanced TMA would increase the benchmark rate in all conditions. The benefit in Marginal conditions assumes all arrivals can use CEFR to achieve visual separations. The benefit in Optimum and IFR conditions derives mainly from improved delivery accuracy that is assumed to result from advanced TMA and RNAV procedures.
- In the following charts, please note that a number of hourly traffic points fall outside the calculated capacity curves at MSP. There are many possible reasons why this may occur without affecting operational safety, including operation on a different runway configuration than the one modeled. Efficient aircraft sequencing or above-average pilot and controller performance can contribute to higher throughputs. Also, actual weather conditions during the hour may have been better than the hourly readings in the database, allowing the use of different ATC procedures.

These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the airport or for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

MINNEAPOLIS-ST. PAUL – Minneapolis-St. Paul International Airport (MSP)

Weather	*Scenario*	*Configuration*	*Procedures*	*Benchmark Rate (per hour)*
Optimum Rate	**Today**	Arrivals on 30R, 30L Departures on 30R, 30L *Frequency of Use: 59% in Optimum conditions*	Independent parallel visual approaches, visual separation	**114-120**
Ceiling and visibility above minima for visual approaches (3500 ft ceiling and 8 mi visibility)	**New Runway (2005)**	Arrivals on 30R, 30L, 35 Departures on 30R, 30L, 17		**160**
Occurrence: 64%	**Planned improvements (2013), including new runway**	Same		**167**
Marginal Rate	**Today**	Arrivals on Runways 30R, 30L Departures on 30R, 30L *Frequency of Use: 55% in Marginal conditions*	Independent parallel instrument approaches, visual separation	**112-115**
Below visual approach minima but better than instrument conditions	**New Runway (2005)**	Arrivals on 30R, 30L, 35 Departures on 30R, 30L, 17		**155**
Occurrence: 28%	**Planned improvements (2013), including new runway**	Same	Independent parallel visual approaches, visual separation	**167**
IFR Rate	**Today**	Arrivals on 12R, 12L Departures on 12R, 12L *Frequency of Use: 64% in IFR conditions*	Independent parallel instrument approaches, radar separation	**112-114**
Instrument conditions (ceiling < 1000 ft or visibility < 3.0 miles)	**New Runway (2005)**	Arrivals on 30R, 30L Departures on 30R, 30L, 17		**125**
Occurrence: 8%	**Planned improvements (2013), including new runway**	Same		**137**

NOTE: Data on frequency of occurrence of weather and runway configuration usage is based on FAA ASPM data for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time.

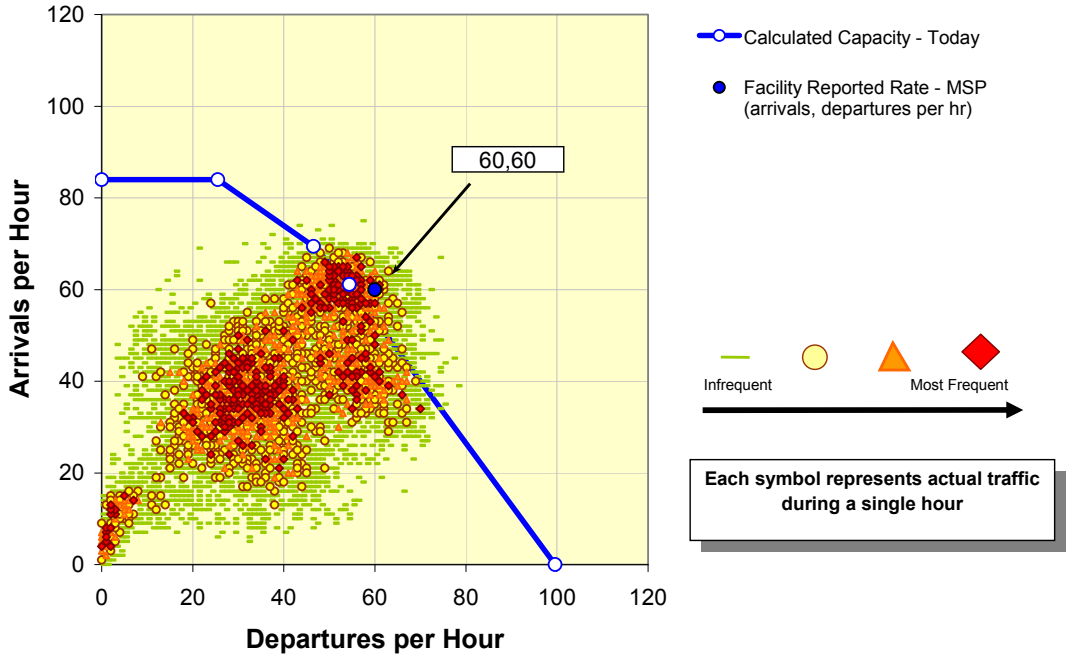
Planned Improvements at MSP include:

- CEFR, for reduced in-trail separations between arrivals in Marginal conditions.
- Advanced TMA/RNAV, to improve delivery accuracy and help MSP consistently utilize available capacity in all conditions.

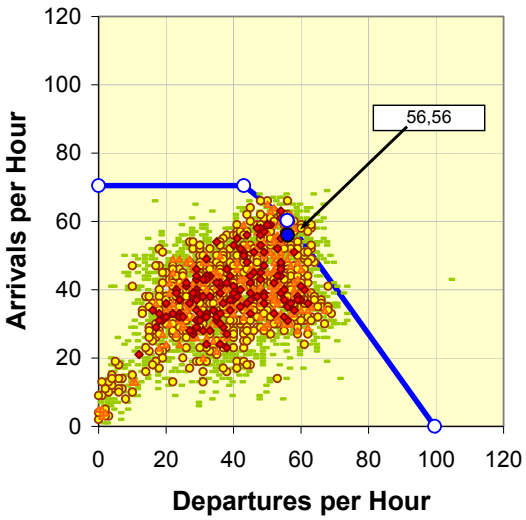
Additional information on these improvements may be found in the Introduction and Overview of this report, under “Assumptions.”

Calculated Capacity (Today) and Actual Throughput

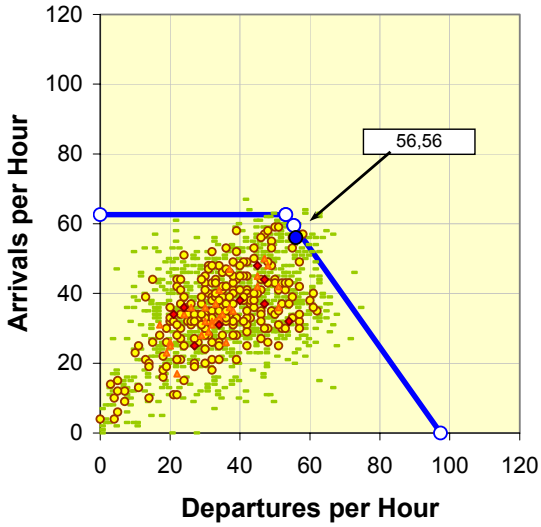
Optimum Rate



Marginal Rate



IFR Rate



Hourly traffic data was obtained from the FAA ASPM database for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time. Facility reported rates were reviewed by ATC personnel at MSP.